AMENDMENTS TO THE CLAIMS

Please cancel Claims 1-19 without prejudice to filing same in a divisional or continuation application. Please add Claims 20-59 as follows:

Claim 1. (Cancelled)

Claim 2. (Cancelled)

Claim 3. (Cancelled)

Claim 4. (Cancelled)

Claim 5. (Cancelled)

Claim 6. (Cancelled)

Claim 7. (Cancelled)

Claim 8. (Cancelled)

Claim 9. (Cancelled)

Claim 10. (Cancelled)

Claim 11. (Cancelled)

Claim 12. (Cancelled)

Claim 13. (Cancelled)

Claim 14. (Cancelled)

Claim 15. (Cancelled)

Claim 16. (Cancelled)

Claim 17. (Cancelled)

Claim 18. (Cancelled)

Claim 19. (Cancelled)

Claim 20. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line;

b) passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

c) gauging the completeness of tissue ablation, including monitoring the current.

Claim 21. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line;

b) passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

c) gauging the completeness of tissue ablation, including monitoring voltage.

Claim 22. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line;

b) passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

c) gauging the completeness of tissue ablation, including monitoring impedance.

E1 cont.

Claim 23. (New) The method of Claim 22 in which monitoring the impedance includes monitoring change in impedance.

Claim 24. (New) The method of Claim 22 in which monitoring the impedance includes monitoring rate of change in impedance.

Claim 25. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line;

b) passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

c) gauging the completeness of ablation by monitoring the transmission of electrical signals across the line of contact.

Claim 26. (New) The method of Claim 25 in which the gauging step includes generating an electrical signal in the tissue on one side of the line of contact and sensing whether it is transmitted across the line of contact.

Claim 27. (New) The method of Claim 20, 21, 22, or 25 in which the completeness of tissue ablation is gauged simultaneously with passing electrical current through both walls to form the line of ablated tissue.

Claim 28. (New) The method of Claim 20, 21, 22, or 25 including stopping the electrical current when it is gauged that the ablation is transmural.

Claim 29. (New) The method of Claim 20, 21, 22, or 25 including generating an audible or visible signal when it is gauged that the ablation is transmural.

Claim 30. (New) The method of Claim 20, 21, 22, or 25 in which the hollow organ or vessel is a human heart and the opposing walls are walls of a heart atrium.

Claim 31. (New) The method of Claim 20, 21, 22, or 25 in which the foregoing steps are repeated a plurality of times, each time partially circumscribing the organ or vessel and performing the steps a sufficient number of times to form a series of lines of

ablated tissue that together substantially fully circumscribes a desired area of the organ or vessel.

Claim 32. (New) The method of Claim 31 in which the organ or vessel is a human heart and the desired area comprises an area of a heart atrium adjacent to two pulmonary veins and the steps are performed a sufficient number of times to circumscribe the two pulmonary veins.

Claim 33. (New) The method of Claim 32 in which the left pulmonary veins are circumscribed and the right pulmonary veins are separately circumscribed and the lines of ablation circumscribing the left and right pulmonary veins do not intersect.

Claim 34. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line;

b) passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

c) the hollow organ or vessel being a human heart and the opposing walls being walls of a heart atrium, and the method including performing a gross thoracotomy to access the human heart.

Claim 35. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line;

b) passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

E1 cont.

c) the hollow organ or vessel being a human heart and the opposing walls being walls of a heart atrium, and the method including accessing the human heart intercostally or sub-xyphoid.

Claim 36. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line and for a distance on both sides of the line;

b) ablating the tissue in both walls along the line of contact sufficient to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together; and

c) the ablating including passing electrical current through the walls along the line and the method further including gauging

the completeness of tissue ablation including monitoring current voltage or impedance.

Claim 37. (New) A method for creating an electrically isolating line of ablated tissue on a hollow organ or vessel having opposing walls comprising:

a) bringing the opposing walls of the organ or vessel into contact with each other along a line and for a distance on both sides of the line;

b) compressing the walls together along the line of contact and for the distance on both sides of the line to substantially express liquid from therebetween; and

B1 cont.

c) ablating the tissue in both walls along the line of contact sufficient to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together.

Claim 38. The method of Claim 37 including gauging the completeness of tissue ablation.

Claim 39. The method of Claim 37 in which the ablating is carried out by passing electrical current through the walls.

Claim 40. The method of Claim 39 further including gauging the completeness of tissue ablation including monitoring current.

Claim 41. The method of Claim 39 further including gauging the completeness of tissue ablation including monitoring voltage.

Claim 42. The method of Claim 39 further including gauging the completeness of tissue ablation including monitoring impedance.

Claim 43. (New) The method of Claim 42 in which monitoring the impedance includes monitoring the change in impedance.

Claim 44. (New) The method of Claim 43 in which monitoring the impedance includes monitoring the rate of change in impedance.

Claim 45. (New) The method of claim 38 in which gauging the completeness of ablation includes monitoring the transmission of electrical signals across the line of contact.

Claim 46. (New) The method of Claim 45 in which gauging includes generating an electrical signal in the tissue on one side of the line of contact and sensing whether it is transmitted across the line of contact.

E1 cont'

Claim 47. (New) The method of Claim 36 or 38 including stopping the ablating when it is gauged that the ablation is transmural.

Claim 48. (New) The method of Claim 36 or 38 including generating an audible or visible signal when it is gauged that the ablation is transmural.

Claim 49. (New) The method of Claim 36 or 38 in which the hollow organ or vessel is a human heart and the opposing walls are walls of a heart atrium.

Claim 50. (New) The method of Claim 36 or 38 in which the foregoing steps are repeated a plurality of times, each time

partially circumscribing the organ or vessel and performing the steps a sufficient number of times to form a series of lines of ablated tissue that together substantially fully circumscribes a desired area of the organ or vessel.

Claim 51. (New) The method of Claim 50 in which the organ or vessel is a human heart and the desired area comprises an area of a heart atrium adjacent to two pulmonary veins and the steps are performed a sufficient number of times to circumscribe the two pulmonary veins.

Claim 52. (New) The method of Claim 51 in which the left pulmonary veins are circumscribed and the right pulmonary veins are separately circumscribed and the lines of ablation circumscribing the left and right pulmonary veins do not intersect.

Claim 53. (New) The method of Claim 20, 21, 22, 25, 36, or 39 in which the hollow organ or vessel is a human heart and opposed walls of a heart atrium are brought into contact by clamping them together and the electrical current through the opposed walls is bipolar current generated by an RF energy generator.

Claim 54. (New) The method of any one of Claim 20, 21, 22, 25, 36, or 39 in which the hollow vessel or organ is the heart of a human patient and the method includes:

making a percutaneous incision proximal to the xyphoid to define an instrument receiving passage;

providing an ablation instrument including at least a pair of distal electrode members adapted to be connected to opposite terminals of an RF energy generator, to provide a bipolar electrical flow between the electrode members;

inserting the ablation instrument through the instrument receiving passage to a sub-xyphoid region;

advancing the ablation instrument through the sub-xyphoid region to a selected area of the atrium;

E1 cont.

bringing opposed walls of an atrium of the heart together by clamping them along the line between the electrode members; and

ablating the walls along the line by energizing the electrode members.

Claim 55. (New) The method of Claim 53 wherein the step of advancing comprises positioning the electrode members of the ablation instrument in an intrapericardial space.

Claim 56. (New) A method for creating an electrically isolating line of ablated tissue in a human heart atrium:

a) bringing opposing walls of the atrium into contact with each other along a line by clamping the atrium near the pulmonary veins;

b) passing sufficient bipolar electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the atrium without bonding the walls together;

c) gauging the completeness of tissue ablation including monitoring change of impedance; and

d) providing an indication when ablation is gauged transmural.

Claim 57. (New) A bipolar clamp for bringing the opposing walls of a hollow organ or vessel into contact with each other along a line and passing sufficient electrical current through both walls along the line of contact to form a corresponding line of ablated tissue through both walls of the tissue without bonding the walls together.

E) cont.

Claim 58. (New) The bipolar clamp of Claim 57 in which the clamp has a pair of opposed jaws suitable to clamp together opposing walls of the vessel or organ, each jaw carrying an electrically conductive element, the conductive members of the opposed jaws being connectable to opposite terminals of an RF generator.

Claim 59. (New) The bipolar clamp of Claim 58 in which each conductive element comprises a continuous elongated electrode.